latter be brought nigh, 'twill be attracted and enter the body, and take place in the center, or where the attraction is every way equal. If more particles enter, they take their places where the balance is equal between the attraction of the common matter and their own mutual repulſion. 'Tis ſuppoſed they form triangles, whoſe ſides ſhorten as their number increaſes; 'till the common matter has drawn in ſo many, that its whole power of compreſſing thoſe triangles by attraction, is equal to their whole power of expanding themſelves by repulſion; and then will ſuch piece of matter receive no more.

12. When part of this natural proportion of electrical fluid, is taken out of a piece of common matter, the triangles formed by the remainder, are ſuppoſed to widen by the mutual repulſion of the parts, until they occupy the whole piece.

13. When the quantity of electrical fluid taken from a piece of common matter is reſtored again, it enters, the expanded triangles being again compreſſed till there is room for the whole.

14. To explain this: take two apples, or two balls of wood or other matter, each having its own natural quantity of the electrical fluid. Suſpend them by ſilk lines from the ceiling. Apply the wire of a well-charged vial, held in your hand, to one of them (A) Fig. 7. and it will receive from the wire a quantity of the electrical fluid; but will not imbibe it, being already full. The fluid therefore will flow round its ſurface, and form an electrical atmoſphere.

Bring

Bring A into contact with B, and half the electrical fluid is communicated, ſo that each has now an electrical atmoſphere, and therefore they repel each other. Take away theſe atmoſpheres by touching the balls, and leave them in their natural ſtate: then, having fixed a ſtick of ſealing wax to the middle of the vial to hold it by, apply the wire to A, at the ſame time the coating touches B. Thus will a quantity of the electrical fluid be drawn out of B, and thrown on A. So that A will have a redundance of this fluid, which forms an atmoſphere round it, and B an exactly equal deficiency. Now bring theſe balls again into contact, and the electrical atmoſphere will not be divided between A and B, into two ſmaller atmoſpheres as before; for B will drink up the whole atmoſphere of A, and both will be found again in their natural ſtate.

15. The form of the electrical atmoſphere is that of the body it ſurrounds. This ſhape may be rendered viſible in a ſtill air, by raiſing a ſmoke from dry roſin, dropt into a hot tea-ſpoon under the electriſed body, which will be attracted and ſpread itſelf equaly on all ſides, covering and concealing the body. And this form it takes, becauſe it is attracted by all parts of the ſurface of the body, tho' it cannot enter the ſubſtance already replete. Without this attraction it would not remain round the body, but diſſipate in the air.

16. The atmoſphere of electrical particles ſurrounding an electrified ſphere, is not more diſpoſed to leave it or

more

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